



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.    | CONFIRMATION NO. |
|--|-------------|----------------------|------------------------|------------------|
| 10/686,138   | 10/15/2003  | Brian J. Brown       | 03-167US (202.0080001) | 6236             |
| 54953 7590 06/02/2009<br>BROOKS, CAMERON & HUEBSCH, PLLC<br>1221 NICOLLET AVENUE<br>SUITE 500<br>MINNEAPOLIS, MN 55403 |             |                      |                        |                  |
| EXAMINER   |             |                      |                        |                  |
| TYSON, MELANIE RUANO   |             |                      |                        |                  |
| ART UNIT   |             | PAPER NUMBER         |                        |                  |
| 3773   |             |                      |                        |                  |
| MAIL DATE  |             | DELIVERY MODE        |                        |                  |
| 06/02/2009   |             | PAPER                |                        |                  |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/686,138

**Applicant(s)**

BROWN ET AL.

**Examiner**

Melanie Tyson

**Art Unit**

3773

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 April 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9, 12-19 and 22-24 is/are pending in the application.
- 4a) Of the above claim(s) 23 and 24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9, 12-19, and 22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 21 April 2009 has been entered. Claims 10, 11, 20 and 21 remain canceled. Claims 23 and 24 remain withdrawn from consideration.

### ***Response to Arguments***

Applicant's arguments filed 21 April 2009 with respect to the 35 USC § 112 rejection have been fully considered and are persuasive. The 35 USC § 112 rejection of claims 9 and 19 has been withdrawn.

Applicant's arguments with respect to claims 1-9, 12-19, and 22 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**Claims 1, 4-9, 13, 14, and 16-19** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Stinson (U.S. Patent No. 6,340,367 B1)** and **Case et al. (U.S. Publication No. 2004/0167619 - cited on 3/12/07)**. Stinson discloses a stent (see entire document) comprising a tubular structure substantially invisible under MRI visualization (for example, see column 1, lines 43-55) having multiple cells including, but not limited to, first and second cells at a first end of the stent facing opposite directions (thus having orthogonal axes generally perpendicular to each other) and third and fourth cells at a second end of the stent facing opposite directions (thus having orthogonal axes generally perpendicular to each other), and RF markers (24) that may form generally concentric loops of conductive material on an outside surface of any of the cells in which imaging is desired (for example, see Table 2 which also describes coils may be used to mark the ends of the stent) capable of operating and performing the functions as claimed. It would have been obvious to one having ordinary skill in the art at the time the invention was made as a matter of design choice to form the loops on first, second, third, and fourth cells facing opposite directions, or any other cells on the stent ends or body, in order to render those portions visible under MRI if so desired.

Furthermore, one of ordinary skill in the art would have recognized that marking multiple cells of a stent on both ends would render the stent length even more visible, thus enhancing imaging and accuracy of stent placement. Stinson fails to disclose specifically that the loops may delineate a peripheral circumference of the cells.

Case discloses an endoprosthesis comprising markers (see entire document). Case teaches the markers may delineate a peripheral circumference of a cell or aperture of an endoprosthesis (for example, see Figure 15) in order to provide precise identification of the cell or aperture (for example, see paragraph 52). It is well within the general knowledge of one having ordinary skill in the art to apply a known technique to a known device ready for improvement to yield predictable results. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to form Stinson's markers such that they delineate the peripheral circumference of the cells as taught by Case. Doing so would provide the advantage described above, thus enabling a precise positioning of not only the device, but of also certain cells of the device within a body lumen.

With further respect to claims 9 and 19, Stinson discloses the markers may be crimped, welded, or otherwise permanently attached to the outer surface of the cells, thus are considered to be embedded in the structural material as claimed.

**Claims 2, 3, and 15** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Stinson et al.** and **Case et al.** as applied to claims 1 and 13 above, and further view of **Doran et al. (U.S. Publication No. 2002/0055770 A1)**.

Stinson as modified by Case discloses the claimed invention except for the combination of ceramic struts and polymer connectors. Doran discloses a stent (see entire document) comprising cells. Doran teaches the cells are interconnected by connectors in order to increase flexibility of the stent (for example, see paragraph 83). It is well within the general knowledge of one having ordinary skill in the art to apply a known technique to a known device ready for improvement to yield predictable results. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to construct the stent of Stinson as modified by Case with connectors as taught by Doran. Doing so would provide a more flexible stent body. Furthermore, Doran teaches the stent and connectors may be made from materials such as ceramics, polymers, and combinations thereof (for example, see paragraph 187). It would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the struts of ceramic material and the connectors of a polymer material, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of design choice.

**Claims 12 and 22** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Stinson et al.** and **Case et al.** as applied to claims 1 and 13 above, and further view of **Jackson et al. (U.S. Publication No. 2003/0004563)**. Stinson as modified by Case discloses the claimed invention except for a magnetic susceptibility marker. Jackson discloses a tubular structure (see entire document). Jackson teaches connecting magnetic susceptibility markers (such as paramagnetic materials; paragraph

16) that are visible under MRI to the tubular structure. It is well within the general knowledge of one having ordinary skill in the art to apply a known technique to a known device ready for improvement to yield predictable results. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to construct the stent of Stinson as modified by Case with a magnetic susceptibility marker as taught by Jackson. Doing so would further enable a user to clearly recognize the position of the stent under MRI (for example, see paragraph 16), thus facilitating proper implantation.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie Tyson whose telephone number is (571)272-9062. The examiner can normally be reached on Monday through Friday 7-7 (max flex).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jackie Ho can be reached on (571) 272-4696. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

Art Unit: 3773

USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Melanie Tyson /M. T./  
Examiner, Art Unit 3773  
May 29, 2009

/(Jackie) Tan-Uyen T. Ho/  
Supervisory Patent Examiner, Art Unit 3773